SONY

4-484-834-**33**(1)

AV Center

Operating Instructions GB

To cancel the demonstration (Demo) display, see page 13.

DVD VIDEO Video CD COMPACT disc DIGITAL AUDIO DOLBY DIGITAL Made for iPod iPhone

Be sure to install this unit in the dashboard of the car for safety. For installation and connections, refer to the supplied “Installation/Connections” guide.

Warning

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

CAUTION
The use of optical instruments with this product will increase eye hazard. As the laser beam used in this CD/DVD player is harmful to eyes, do not attempt to disassemble the cabinet. Refer servicing to qualified personnel only.

Laser Diode Properties
- Emission Duration: Continuous
- Laser Output: Less than 46.8 µW

(This output is the value measurement at a distance of 70 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.)

Note on the lithium battery
Do not expose the battery to excessive heat such as direct sunlight, fire or the like.

Warning if your car’s ignition has no ACC position
After turning the ignition off, be sure to press and hold OFF on the unit until the display disappears.
Otherwise, the display does not turn off and this causes battery drain.

Table of Contents

Warning. 2
Guide to Parts and Controls 4

Getting Started

Resetting the Unit 6
Setting the Clock 6

Listening to the Radio

Listening to the Radio 7
Storing and Receiving Stations 7
Using Radio Data System (RDS) 8

Playback

Playing a Disc 9
Playing an iPod/USB Device 10
Searching and Playing Tracks 10
Available Options 11
Picture EQ 11
Aspect 11
DVD Audio Level. 11

Settings

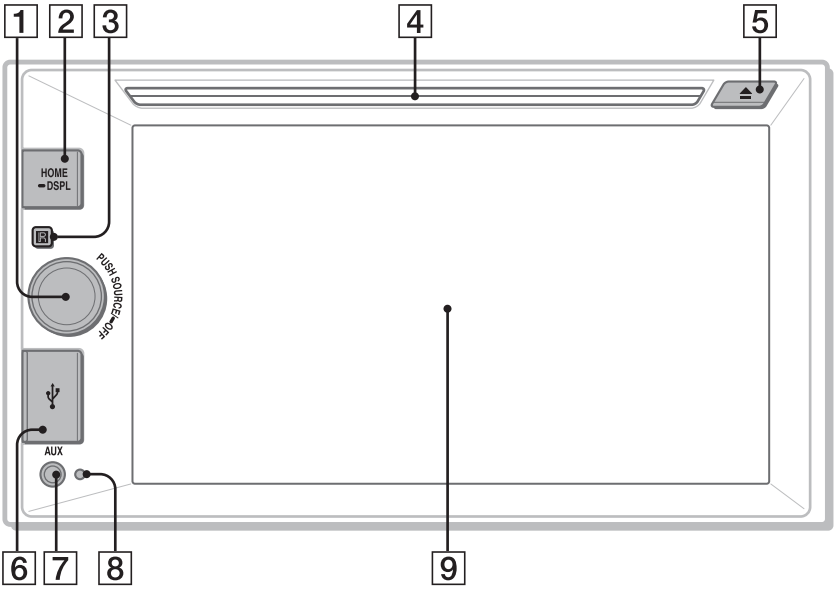
General Settings 12
Touch Panel Adjust 12
Sound Settings 13
Sound Adjust 13
Screen Settings. 13
Visual Settings 14

Additional Information

Auxiliary Audio/Video Equipment 15
Rear View Camera 15
Precautions 15
Maintenance. 18
Specifications 19
Troubleshooting 20
Language Code List 23

Guide to Parts and Controls

Main unit



1 **SOURCE**
Turn on the power.
Change the source. Each press displays a selectable source in a popup on the current display.

-OFF
Press and hold for 1 second to exit the source. Press and hold for more than 2 seconds to turn off the unit. When the unit is turned off, remote commander operation is not available.

Volume control dial
Rotate to adjust the volume.

2 **HOME**
Open the HOME menu.
When pressed during disc, iPod or USB playback, playback is paused and there is no sound. To resume playback, touch ▶.

-DSPL (display)
Press and hold to open the display menu. The monitor off function is set on the display menu. When the monitor off function is activated, the monitor is turned off. Touch anywhere on the display to turn back on.

3 **Receptor for the remote commander**

4 **Disc slot**

5 **⏏ (disc eject)**

6 **USB port**
Open the cover to connect a USB device.

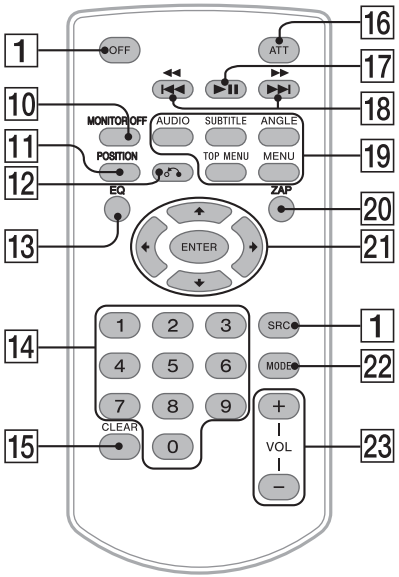
7 **AUX terminal**

8 **Reset button**

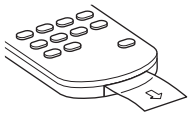
9 **Display/touch panel**

RM-X170 remote commander (supplied with India model only)

The remote commander can be used to operate the audio controls. For menu operations, use the touch panel.



Remove the insulation film before use.



10 **MONITOR OFF**

11 **POSITION**
This button is not supported.

12 **↶ (return)**
Return to the previous display/return to the menu on a Video CD (VCD).

13 **EQ (equalizer)**
Select an equalizer curve.

14 **Number buttons (0 - 9)**

15 **CLEAR**

16 **ATT (attenuate)**
Attenuate the sound. To cancel, press again or press VOL +.

17 **▶II (play/pause)**

18 **I◀◀ ◀◀/▶▶▶▶I (previous/next)**

19 **DVD playback setting buttons**

20 **ZAP (zappin)** (page 7)

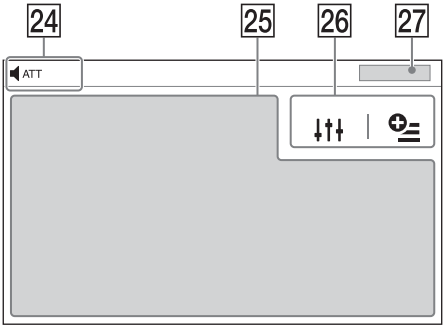
21 **←/↑/↓/→ (cursor)/ENTER**

22 **MODE**
Select the radio band.

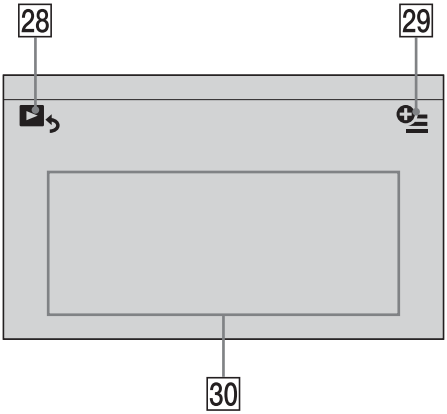
23 **VOL (volume) +/−**

Screen displays

Playback screen:



Home screen:



24 **Indications**

ATT
Lights up when the sound is attenuated.

25 **Application specific area**
Display playback controls/indications or show the unit's status. Displayed items differ depending on the source.

26 **Common area**

⇅
Accesses the Sound Adjust settings menu directly (page 13).

(option)
Open the option menu. Option menu differs depending on the source.

27 **Clock (page 6)**
When the source selects [AUX Front], [AUX Rear] or [Rear Camera], the clock is not displayed.

28
Switch from the HOME screen to the playback screen.

29 **(option)**
Open the HOME option menu.
Press HOME, then touch .

[Icon View]
Selects the icon display: [Line View] or [Grid View].

To return to the home screen, touch .

30 **Source select keys**
Change the source.

Getting Started

Resetting the Unit

Before operating the unit for the first time, or after replacing the car battery or changing connections, you must reset the unit.

1 **Press the reset button on the unit.**
Use a pointed object, such as a ballpoint pen.

Note
Pressing the reset button will erase the clock setting and some stored contents.

Setting the Clock

1 **Press HOME, then touch [Settings].**

2 **Touch , then touch [Clock Adjust].**
The setting display appears.

3 **Touch ▲/▼ to set the hour and minute.**

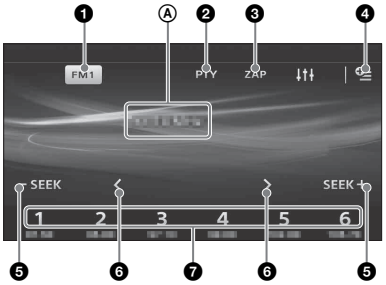
4 **Touch [Set].**
The setting is complete.

To activate/deactivate the CT function (page 8), touch [Clock Time].

Listening to the Radio

To listen to the radio, press HOME then touch [Tuner].

Reception controls/indications



Reception controls (❶ to ❼)

❶ **Current band icon**
Opens the band list.

❷ **[PTY] (Program Types) (FM only)**
Opens the PTY list (page 8).

❸ **[ZAP] (ZAPPIN™)**
Helps to find a desired station by listening to preset stations for a few seconds.

❹
Opens the tuner option menu.

❺ **−SEEK/SEEK+**
Tunes in automatically.

❻ **〈/〉**
Tunes in manually.
Touch and hold to continuously skip frequencies.

❼ **[1] to [6]**
Selects a preset station.
Touch and hold to store the currently displayed frequency in that preset.

Reception indications (Ⓐ)

Ⓐ Frequency

Storing and Receiving Stations

Caution
When tuning to stations while driving, use Best Tuning Memory (BTM) to prevent an accident.

Storing automatically (BTM)

1. Select the desired band ([FM1], [FM2], [FM3], [AM1], or [AM2]).
2. Touch .
3. Touch [BTM], then [Search].
   The unit stores the first six available stations in presets ([1] to [6]).

Tuning

1. Touch the current band.
   The band list appears.
2. Touch the desired band ([FM1], [FM2], [FM3], [AM1], or [AM2]).
3. Perform tuning.

   To tune automatically
   Touch **−SEEK/SEEK+**.
   Scanning stops when the unit receives a station. Repeat this procedure until the desired station is received.

   To tune manually
   Touch 〈/〉 repeatedly until the desired frequency is received.
   To skip frequencies continuously, touch and hold 〈/〉.

Storing manually

1. While receiving the station that you want to store, press and hold the desired preset number ([1] to [6]).

Receiving stored stations

1. Select the band.
2. Touch the desired preset number ([1] to [6]).

Searching for the desired station from preset stations (Tuner Preset ZAPPIN)

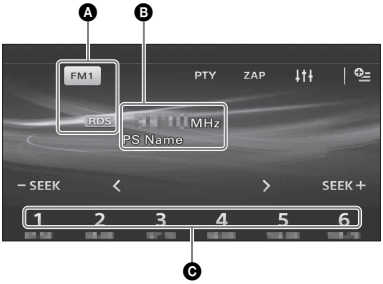
Tuner Preset ZAPPIN helps you to find a desired station by listening to preset stations for a few seconds.

1 While listening to radio, touch [ZAP].
Tuner Preset ZAPPIN starts, and subsequent stations are received in sequence.

2 Touch [ZAP] again when the desired station is received.

Using Radio Data System (RDS)

Display items



A Band name, RDS*
B Frequency, program service name
C Preset number

* During RDS reception.

RDS services

This unit automatically provides RDS services as follows:
PTY (Program Types)
Displays the currently received program type. Also searches for a designated program type.
CT (Clock Time)
The CT data from the RDS transmission sets the clock.

Selecting program types (PTY)

1 During FM reception, touch [PTY].
To scroll the list, touch ▲/▼.

2 Touch the desired program type.
The unit searches for a station broadcasting the selected program type.

To close the PTY list, touch ⮌.

Type of programs

News (News), **Current Affairs** (Current Affairs), **Information** (Information), **Sport** (Sports), **Education** (Education), **Drama** (Drama), **Cultures** (Culture), **Science** (Science), **Varied Speech** (Varied), **Pop Music** (Pop Music), **Rock Music** (Rock Music), **Easy Listening** (M.O.R. Music), **Light Classics M** (Light classical), **Serious Classics** (Serious classical), **Other Music** (Other Music), **Weather & Metr** (Weather), **Finance** (Finance), **Children's Progs** (Children's program), **Social Affairs** (Social Affairs), **Religion** (Religion), **Phone In** (Phone In), **Travel & Touring** (Travel), **Leisure & Hobby** (Leisure), **Jazz Music** (Jazz Music), **Country Music** (Country Music), **National Music** (National Music), **Oldies Music** (Oldies Music), **Folk Music** (Folk Music), **Documentary** (Documentary)

Note
You cannot use this function in countries/regions where no PTY data is available.

For playable discs or file types, see page 16.

Playing a Disc

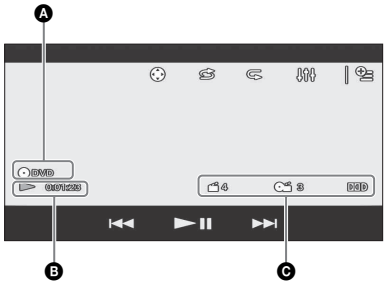
Depending on the disc, some operations may be different or restricted.
Refer to the operating instructions supplied with the disc.

1 Insert the disc (label side up), then playback starts.

If a DVD menu appears

Touch the desired item in the DVD menu.
You can also use the menu control panel, which can be displayed by touching the screen anywhere except the DVD menu items. Touch ←/↑/↓/→ to move the cursor, then touch [ENTER] to confirm.

Example of playback indications (DVD)



A Current source icon, format
B Playback status, elapsed playback time
C Chapter/title number, audio format

Touch the display if the indications are not displayed.
For audio discs, some indications are always displayed during playback.

Using PBC (playback control) functions

The PBC menu interactively assists with operations while a PBC-compatible VCD is played.

1 Start playing a PBC-compatible VCD.
The PBC menu appears.

2 Touch ⌨.
The menu control panel appears.

3 Touch the number keys to select the desired item, then touch [ENTER].

4 Follow the instructions in the menu for interactive operations.
To return to the previous display, touch ↩.

To deactivate PBC functions, set [Video CD PBC] to [OFF] (page 14).

Notes
- During PBC playback, the track number, playback item, etc., do not appear on the playback display.
- Resume playback is unavailable during playback with PBC.

Configuring audio settings

To change the audio language/format

When playing a DVD Video, the audio language can be changed if the disc is recorded with multilingual tracks. You can also change the audio format when playing a disc recorded in multiple audio formats (e.g., Dolby Digital).
During playback, touch the screen and then ⚙.
Touch ♪ repeatedly until the desired audio language/format appears.

Example: Dolby Digital 5.1 ch

If the same language is displayed two or more times, the disc is recorded in multiple audio formats.

To change the audio channel

When playing a VCD, you can listen to both left and right channels, right channel only or left channel only, via both right and left speakers.
During playback, touch LR repeatedly until the desired audio channel appears.
The options are indicated below.

[Stereo]: Standard stereo sound (default)
[Left]: Left channel sound (monaural)
[Right]: Right channel sound (monaural)

Playing an iPod/USB Device

In these Operating Instructions, “iPod” is used as a general reference for the iPod functions on the iPod and iPhone, unless otherwise specified by the text or illustrations.
For details on the compatibility of your iPod, see “About iPod” (page 18) or visit the support site on the back cover.

MSC (Mass Storage Class)-type USB devices (such as a USB flash drive, digital media player, Android phone) compliant with the USB standard can be used.
Depending on the digital media player or Android phone, setting the USB connection mode to MSC is required.

1 **Reduce the volume on this unit.**
If the device is turned off, turn it on.

2 **Connect the iPod or the USB device to the USB port.**
Playback starts automatically.
If an iPod/USB device is already connected, to start playback, press HOME, then touch [iPod/USB].

To stop playback

Press and hold OFF for 1 second.

To remove the device

Stop playback, then disconnect.
Do not disconnect during playback, as data in the device may be damaged.

Caution for iPhone
When you connect an iPhone via USB, telephone volume is controlled by the iPhone itself. In order to avoid sudden loud sound after a call, do not increase the volume on the unit during a call.

About resuming mode
When the iPod currently playing is connected to the dock connector, the mode of this unit changes to resuming mode and playback starts in the mode set by the iPod.
In resuming mode, repeat/shuffle play are not available.

Searching and Playing Tracks

Using repeat play and shuffle play

1 **During playback, touch (repeat) or (shuffle) repeatedly until the desired option appears.**
Repeat or shuffle play starts.

Available play modes differ depending on the selected sound source.

Note
Repeat play and shuffle play are not available for version 2.0 VCD with PBC function.

Searching for a file from the list screen

1 **During disc or USB playback, touch .**
The list screen from the currently played item appears.

Furthermore, touch , or to list up by the file type (audio/video/photo).

2 **Touch the desired item.**
Playback starts.

Available Options

Various settings are available in each source by touching . The available items differ depending on the situation.

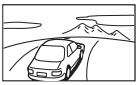
Picture EQ

Adjusts the picture to suit the interior brightness of the car. This setting is available only when the parking brake is set.
Source: USB (Xvid/Photo), Disc (DVD/VCD/Xvid/Photo), AUX (Available only when [AUX] is set to [Rear], and [AUX Input] is set to [Video] or [Auto].)

Option	Purpose
Dynamic (●), Standard, Theater, Sepia	To select the picture quality.

Aspect

This setting is available only when the parking brake is set.
Source: USB (Xvid/Photo), Disc (DVD/VCD/Xvid/Photo), AUX (Available only when [AUX] is set to [Rear], and [AUX Input] is set to [Video] or [Auto].)

Option	Purpose
Normal	To display a picture with 4:3 aspect ratio (regular picture).
Wide 	To display a picture with 4:3 aspect ratio enlarged to the left and right edges of the screen, with overflowing parts of the top and bottom cut off to fill the screen.
Full (●)	To display a picture with 16:9 aspect ratio.
Zoom	To display a picture with 4:3 aspect ratio enlarged to the left and right edges of the screen.

DVD Audio Level

Source: Disc

Option	Purpose
–	Adjusts the audio output level between -10 and +10 for a DVD recorded in Dolby Digital format, to balance the volume level between discs.

Settings

Select [Settings] in the HOME menu when you need to change the settings of the unit.
"●" in the table below indicates the default setting.

1 Press HOME, then touch [Settings].

2 Touch one of the setup category icons.
: General Settings (page 12)
♪: Sound Settings (page 13)
: Screen Settings (page 13)
: Visual Settings (page 14)

3 Move the scrollbar up and down to select the desired item.

To return to the previous display, touch .

To switch from the HOME screen to the playback screen, touch .

General Settings

Language
Unit status: Any status

Option	Purpose
English (●), Español, Русский	To select the display language.

Time Format
Unit status: Any status

Option	Purpose
12-hour (●), 24-hour	To change the time format.

Clock Time
Unit status: Any status

Option	Purpose
OFF (●), ON	To activate the CT function.

Clock Adjust
Unit status: Any status

Option	Purpose
–	To set the clock. (Available only when [Clock Time] is set to [OFF].)

Beep
Unit status: Any status

Option	Purpose
OFF, ON (●)	To activate the operation sound.

Dimmer
Unit status: Any status

Option	Purpose
OFF	To deactivate the dimmer.
Auto (●)	To dim the display automatically when you turn lights on. (Available only when the illumination control lead is connected.)
ON	To dim the display.

Dimmer Level
Unit status: Any status

Option	Purpose
(–5 - +5) ●: 0	To select the brightness level when the dimmer is activated.

Touch Panel Adjust
Unit status: Any status

Option	Purpose
–	To adjust the touch panel calibration if the touching position does not correspond with the proper item.

Output Color System
Unit status: No source selected

Option	Purpose
NTSC, PAL (●)	To change the color system according to the connected monitor. (SECAM is not supported.)

Camera Input
Unit status: Any status

Option	Purpose
OFF	To deactivate the input.
Normal (●)	To display the picture from the rear view camera.
Reverse	To flip the picture from the rear view camera horizontally.

Steering Control

You can operate the unit with buttons on the steering wheel.
For safety, park your car before making this setting.
Unit status: Any status

Option	Purpose
User	To display the instruction and panel for steering wheel control.
External (●)	To deactivate steering wheel control. To use rotary commander control.

User Defined

This setting is available only when [Steering Control] is set to [User].
The steering button panel appears. Press and hold a button to be assigned to the steering wheel. Then press and hold the respective button on the steering wheel.
Unit status: Any status

Option	Purpose
–	To display the instruction and control panel.

Note
This function may not be available on some vehicles.

♪Sound Settings

Rear/Sub Out

Switches the audio output between the rear speakers and subwoofer.
Unit status: Any status

Option	Purpose
Rear	To output audio signals to the rear speakers (amplifier).
Subwoofer (●)	To output audio signals to the subwoofer.

Sound Adjust

Selects EQ3 and adjusts subwoofer level, balance/fader level or crossover filter.
Unit status: Any status

Option	Purpose
EQ3	
OFF (●), R&B, Pop, Rock, Hip-Hop, Dance, Electronica (no-India model), Bollywood (India model), Custom	To select the equalizer curve; customize the equalizer curve. When setting [Custom], selects the equalizer settings: [Low], [Mid], [High]. For India model, the initial setting is [Bollywood].
Subwoofer: (ATT, –10 - +10) ●: 0	To adjust the volume level of the subwoofer. (Available only when [Subwoofer] is set to [ON].)
Balance: (L 15 - 0 - R 15) ●: 0	To adjust the sound balance between left and right speakers.
Fader: (Front 15 - 0 - Rear 15) ●: 0	To adjust the sound balance between front and rear speakers.
HPF: 80 Hz, 100 Hz, 120 Hz, 140 Hz, 160 Hz, OFF (●)	To select the cut-off frequency of the front/rear speakers.
LPF: OFF (●), 80 Hz, 100 Hz, 120 Hz, 140 Hz, 160 Hz	To select the cut-off frequency of the subwoofer. (Available only when [Subwoofer] is set to [ON].)

Screen Settings

Demo

Unit status: Any status

Option	Purpose
OFF, ON (●)	To activate the demonstration.

Visual Settings

DVD Menu Language

Unit status: No source selected

Option	Purpose
English (●), Chinese, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Swedish, Finnish, Norwegian, Russian, Other	To select the default language for the disc's menu.

DVD Audio Language

Unit status: No source selected

Option	Purpose
English (●), Chinese, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Swedish, Finnish, Norwegian, Russian, Other	To select the default language for the soundtrack.

DVD Subtitle Language

Unit status: No source selected

Option	Purpose
English (●), Chinese, German, French, Italian, Spanish, Portuguese, Dutch, Danish, Swedish, Finnish, Norwegian, Russian, Other	To select the default subtitle language for DVD.

Monitor Type

Selects an aspect ratio suitable for the connected monitor.
(The screen aspect ratio of this unit also changes.)
Depending on the disc, [Letterbox] may be selected automatically instead of [Pan Scan], and vice versa.
Unit status: No source selected

Option	Purpose
16:9 (●)	To display a wide picture. Suitable when connecting to a wide-screen monitor or a monitor with a wide mode function.
Letterbox	To display a wide picture with bands on the upper and lower positions of the screen. Suitable when connecting to a 4:3 screen monitor.
Pan Scan	To display a wide picture on the entire screen and automatically cut off the portions that do not fit.

Video CD PBC

Unit status: No source selected

Option	Purpose
OFF, ON (●)	To play a VCD with PBC functions.

Auxiliary Audio/Video Equipment

You can connect up to an optional device, such as a portable media player, game console, etc., to the AUX terminal on the unit.

Selecting an auxiliary device

1. Press HOME, then touch [AUX].
   The AUX playback display appears.

Adjusting the volume level

Be sure to adjust the volume for the connected device before playback.

1. Reduce the volume on the unit.
2. Press HOME, then touch [AUX].
   The AUX playback display appears.
3. Touch to open the menu, then touch [Input Level].
4. Set your usual listening volume on the unit.
5. Touch –/+ repeatedly to adjust the level.
   The level is adjustable in single steps, between –10 and +15.

Setting the type of device

By setting the type (video or audio) of each connected device, the background screen can be switched accordingly.

1. Press HOME, then touch [AUX].
2. Touch [Front] or [Rear].
   [Front] is available only for audio.
3. When selecting [Rear], touch to open the menu, then touch [AUX Input].
4. Touch [Audio], [Video] or [Auto].
   The default setting is [Auto].

To return to the previous display, touch .

Rear View Camera

By connecting the optional rear view camera to the CAMERA IN terminal, you can display the picture from the rear view camera.
The picture from the rear view camera appears when:

- the back lamp lights up (or the shift lever is set to the R (reverse) position).
- you press HOME then touch [Rear Camera].
- you press and hold DSPL then touch [Rear Camera].

Precautions

- Cool off the unit beforehand if your car has been parked in direct sunlight.
- Power antenna (aerial) extends automatically.

Moisture condensation

Should moisture condensation occur inside the unit, remove the disc and wait for about an hour for it to dry out; otherwise the unit will not operate properly.

To maintain high sound quality

Do not splash liquid onto the unit or discs.

Notes on safety

- Comply with your local traffic rules, laws and regulations.
- While driving
  - Do not watch or operate the unit, as it may lead to distraction and cause an accident. Park your car in a safe place to watch or operate the unit.
  - Do not use the setup feature or any other function which could divert your attention from the road.
  - **When backing up your car, be sure to look back and watch the surroundings carefully for your safety, even if the rear view camera is connected. Do not depend on the rear view camera exclusively.**
- While operating
  - Do not insert your hands, fingers or foreign object into the unit, as it may cause injury or damage to the unit.
  - Keep small articles out of the reach of children.
  - Be sure to fasten seatbelts to avoid injury in the event of a sudden movement of the car.

Preventing an accident

Pictures appear only after you park the car and set the parking brake.
If the car starts moving during video playback, the following caution is displayed and you cannot watch the video.

[Video blocked for your safety.]

The monitor connected to the REAR VIDEO OUT is active while the car is in motion.
You cannot watch the video, but you can hear audio.

Do not operate the unit or watch the monitor while driving.

Notes on installation

- We recommend this unit should be installed by a qualified technician or service personnel.
  - If you try to install this unit by yourself, refer to the supplied "Installation/Connections" guide and install the unit properly.
  - Improper installation may cause battery drain or a short circuit.
- If the unit does not work properly, check the connections first, referring to the supplied "Installation/Connections" guide. If everything is in order, check the fuse.
- Protect the unit surface from damage.
  - Do not expose the unit surface to chemicals, such as insecticide, hair spray, insect repellent, etc.
  - Do not leave rubber or plastic materials in contact with the unit for a long time. Otherwise, the finish of the unit may be impaired, or deformation may occur.
- When installing, be sure to fix securely.
- When installing, be sure to turn the ignition off. Installing the unit with the ignition on may cause battery drain or a short circuit.
- When installing, be sure not to damage any car parts such as pipes, tubes, fuel tank or wiring by using a drill, as it may cause a fire or an accident.

Notes on LCD panel

- **Do not wet the LCD panel or expose it to liquids. This may cause a malfunction.**

- Do not press on the LCD panel as doing so can distort the picture or cause a malfunction (i.e., the picture may become unclear, or the LCD panel may be damaged).
- Do not touch other than with the finger, as it may damage or break the LCD panel.
- Clean the LCD panel with a dry soft cloth. Do not use solvents such as benzine, thinner, commercially available cleaners, or antistatic spray.
- Do not use this unit outside the temperature range 5 – 45 °C (41 – 113 °F).
- If your car was parked in a cold or hot place, the picture may not be clear. However, the monitor is not damaged, and the picture will become clear after the temperature in your car becomes normal.
- Some stationary blue, red or green dots may appear on the monitor. These are called "bright spots," and can happen with any LCD. The LCD panel is precision-manufactured with more than 99.99% of its segments functional. However, it is possible that a small percentage (typically 0.01%) of the segments may not light up properly. This will not, however, interfere with your viewing.

Playable discs and file types

Discs

DVD*	DVD VIDEO DVD-R/DVD-R DL/DVD-RW (Video mode) DVD+R/DVD+R DL/DVD+RW
VCD	Video CD (Ver. 1.0/1.1/2.0)
CD	Audio CD CD-ROM/CD-R/CD-RW

* "DVD" may be used in these Operating Instructions as a general term for DVD VIDEOs, DVD-Rs/DVD-RWs, and DVD+Rs/DVD+RWs.

File types

For details on compression formats, see page 17.

Audio	MP3 file, WMA file
Video	Xvid file
Photo	jpeg file (.jpg)

Notes on discs

- Do not expose discs to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight.
- Before playing, wipe the discs with a cleaning cloth from the center out. Do not use solvents such as benzine, thinner, commercially available cleaners.

- This unit is designed to play discs that conform to the Compact Disc (CD) standard. DualDiscs and some of the music discs encoded with copyright protection technologies do not conform to the Compact Disc (CD) standard, therefore, these discs may not be playable by this unit.
- **Discs that this unit CANNOT play**
  - Discs with labels, stickers, or sticky tape or paper attached. Doing so may cause a malfunction, or may ruin the disc.
  - Discs with non-standard shapes (e.g., heart, square, star). Attempting to do so may damage the unit.
  - 8 cm (3 1/4 in) discs.

Note on playback operations of DVDs and VCDs

Some playback operations of DVDs and VCDs may be intentionally set by software producers. Since this unit plays DVDs and VCDs according to the disc contents the software producers designed, some playback features may not be available. Also, refer to the instructions supplied with the DVDs or VCDs.

Notes on DATA CDs, DATA DVDs and USB playback

- Some DATA CDs/DATA DVDs (depending on the equipment used for its recording, or the disc condition) may not play on this unit.
- Finalization is required for some discs (page 17).
- The unit is compatible with the following standards.
  For DATA CDs
  - ISO 9660 level 1/level 2 format, Joliet/Romeo in the expansion format
  For DATA DVDs
  - UDF Bridge format (combined UDF and ISO 9660)
- The maximum number of:
  - folders (albums): 256 (including root and empty folders).
  - files (tracks/videos/photos) and folders contained in a disc: 2,000 (if a folder/file names contain many characters, this number may become less than 2,000).
  - displayable characters for a folder/file name: 32.
- Compatible codecs are MP3 (.mp3), WMA (.wma), JPEG (.jpg), and Xvid (.avi).
- DRM (Digital Rights Management) files may not be played.

Notes on finalizing discs

The following discs are required to be finalized to play on this unit.

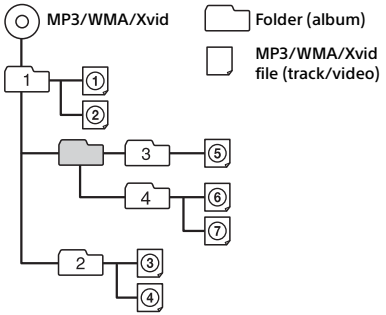
- DVD-R/DVD-R DL (in video mode)
- DVD-RW in video mode
- DVD+R/DVD+R DL
- CD-R
- CD-RW

DVD+RW can be played without finalization. The disc is automatically finalized.

For details, refer to the manual supplied with the disc.

Playback order of MP3/WMA/Xvid files

Folders and files are arranged in ascending order of updated date and time.



About WMA files

WMA*1 files meeting the following requirements can be played. Playback is not guaranteed for all WMA files meeting the requirements.

Codec

- Media File format: ASF file format
- File extension: .wma
- Bit rate: 48 to 192 kbps (Supports variable bit rate (VBR))*2

• Sampling frequency*3: 44.1 kHz

About MP3 files

MP3 files meeting the following requirements can be played. Playback is not be guaranteed for all MP3 files meeting the requirements.

Codec

- Media File format: MP3 (MPEG-1 Layer3) file format
- File extension: .mp3
- Bit rate: 48 to 192 kbps (Supports variable bit rate (VBR))*2
- Sampling frequency*3: 32, 44.1, 48 kHz

About Xvid files

Xvid files meeting the following requirements can be played. Playback is not be guaranteed for all Xvid files meeting the requirements.

Codec

- Media File format: Xvid file format
- File extension: .avi
- Profile: MPEG-4 Advanced Simple Profile
- Bit rate: Max. 8 Mbps
- Frame rate: Max. 30 fps (30p/60i)
- Resolution: Max. 720 × 576*4

About JPEG files

JPEG*5 files meeting the following requirements can be played. Playback is not be guaranteed for all JPEG files meeting the requirements.

Codec

- Media File format: Compatible with DCF 2.0/Exif 2.21 file format
- File extension: .jpg
- Profile: Baseline Profile
- Number of pixels: Max. 6,048 × 4,032 pixels (24,000,000 pixels)

*1 Copyright protected WMA file cannot be played back.

*2 For MSC, non-standard bit rates or non-guaranteed bit rates are included depending on the sampling frequency.

*3 Sampling frequency may not correspond to all encoders.

*4 These numbers indicate the maximum resolution of playable video, and do not indicate the player's display resolution. The display resolution is 800 × 480.

*5 Some photo files cannot be played back, depending on their file formats.

About iPod

- You can connect to the following iPod models. Update your iPod devices to the latest software before use.

Compatible iPhone/iPod models.

Compatible Model	USB
iPhone 5	○
iPhone 4S	○
iPhone 4	○
iPhone 3GS	○
iPod touch (5th generation)	○
iPod touch (4th generation)	○
iPod touch (3rd generation)	○
iPod classic	○
iPod nano (7th generation)	○
iPod nano (6th generation)	○
iPod nano (5th generation)	○

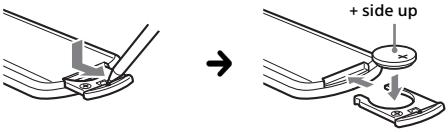
- "Made for iPod" and "Made for iPhone" mean that an electronic accessory has been designed to connect specifically to iPod or iPhone, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod or iPhone may affect wireless performance.

If you have any questions or problems concerning your unit that are not covered in these Operating Instructions, consult your nearest Sony dealer.

Maintenance

Replacing the lithium battery of the remote commander

Under normal conditions, the battery will last approximately 1 year. (The service life may be shorter, depending on the conditions of use.) When the battery becomes weak, the range of the remote commander becomes shorter. Replace the battery with a new CR2025 lithium battery. Use of any other battery may present a risk of fire or explosion.



Notes on the lithium battery
- Keep the lithium battery out of the reach of children. Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, otherwise a short-circuit may occur.

WARNING
Battery may explode if mistreated.
Do not recharge, disassemble, or dispose of in fire.

Specifications

Monitor section
Display type: Wide LCD color monitor
Dimensions: 6.2 in
System: TFT active matrix
Number of pixels:
1,152,000 pixels (800 × 3 (RGB) × 480)
Color system:
PAL/NTSC/SECAM/PAL-M automatic select

Tuner section
FM
Tuning range: 87.5 – 108.0 MHz
Antenna (aerial) terminal:
External antenna (aerial) connector
Intermediate frequency: 150 kHz
Usable sensitivity: 10 dBf
Selectivity: 70 dB at 400 kHz
Signal-to-noise ratio: 70 dB (mono)
Separation at 1 kHz: 30 dB
Frequency response: 20 - 15,000 Hz

AM
Tuning range: 531 – 1,602 kHz
Antenna (aerial) terminal:
External antenna (aerial) connector
Intermediate frequency:
9,267 kHz or 9,258 kHz/4.5 kHz
Sensitivity: 44 µV

DVD/CD Player section
Signal-to-noise ratio: 80 dB
Frequency response: 20 – 20,000 Hz
Wow and flutter: Below measurable limit
Harmonic distortion: 0.05%
Region code: Labeled on the bottom of the unit

USB Player section
Interface: USB (Full-speed)
Maximum current: 1 A

Power amplifier section
Outputs: Speaker outputs
Speaker impedance: 4 – 8 ohms
Maximum power output: 55 W × 4 (at 4 ohms)

General
Outputs:
Video output terminal (rear)
Audio output terminals (front, rear/sub switchable)
Power antenna (aerial)/Power amplifier control terminal (REM OUT)
Inputs:
Illumination control terminal
Remote controller input terminal
Antenna (aerial) input terminal
Parking brake control terminal
Reverse input terminal
Camera input terminal
AUX audio input terminal (Front)
AUX Audio/Video input terminal (Rear)
USB port
External input terminal
Power requirements: 12 V DC car battery (negative ground (earth))
Dimensions: Approx. 178 mm × 101.5 mm × 169 mm (7 1/8 × 4 × 6 3/4 in) (w/h/d)
Mounting dimensions:
Approx. 178 mm × 100 mm × 165 mm (7 1/8 × 4 × 6 1/2 in) (w/h/d)
Mass: Approx. 1.6 kg (3 lb 9 oz)
Package contents:
Main unit (1)
Remote Commander (1): RM-X170 (India model only)
Parts for installation and connections (1 set)
Optional accessories/equipment:
Remote Commander: RM-X170 (except for India model)
Mobile monitor: XVM-B62
Rear View Camera: XA-R800C
Mounting bracket: GMD-D100

Your dealer may not handle some of the above listed accessories. Please ask the dealer for detailed information.

Design and specifications are subject to change without notice.

Region code
The region system is used to protect software copyrights.

The region code is located on the bottom of the unit, and only DVDs labeled with an identical region code can be played on this unit.

DVDs labeled can also be played.

If you try to play any other DVD, the message [Playback prohibited by region code.] will appear on the monitor screen. Depending on the DVD, no region code may be labeled even though playing the DVD is prohibited by area restrictions.

Copyrights

US and foreign patents licensed from Dolby Laboratories.

MPEG Layer-3 audio coding technology and patents licensed from Fraunhofer IIS and Thomson.

Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.

Windows Media is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.

This product is protected by certain intellectual property rights of Microsoft Corporation. Use or distribution of such technology outside of this product is prohibited without a license from Microsoft or an authorized Microsoft subsidiary.

"DVD VIDEO," "DVD-R," "DVD-RW," "DVD+R," and "DVD+RW" are trademarks.

ZAPPIN is a trademark of Sony Corporation.

iPhone, iPod, iPod classic, iPod nano, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries.

Android is a trademark of Google Inc. Use of this trademark is subject to Google Permissions.

All other trademarks are trademarks of their respective owners.

Troubleshooting

If there are any problems with your unit/mobile device, make sure your car is parked in a safe place before examining any issues.

The following checklist will help you remedy problems you may encounter with your unit. Before going through the checklist below, check the connection and operating procedures.
For details on using the fuse and removing the unit from the dashboard, refer to the installation/connections manual supplied with this unit.

If the problem is not solved, visit the support site on the back cover.

General

No power is being supplied to the unit.
→ Check the fuse.
→ The connection is not correct.
— Connect the yellow and red power supply leads.

There is no beep sound.
→ An optional power amplifier is connected and you are not using the built-in amplifier.

The contents of the memory have been erased.
→ The power supply lead or battery has been disconnected or it is not connected properly.

Stored stations and correct time are erased.
The fuse has blown.
The unit makes a noise when the position of the ignition is switched.
→ The leads are not matched correctly with the car's accessory power connector.

The display disappears from/does not appear on the monitor.
→ The dimmer is set to [ON] (page 12).
→ The display disappears if you press and hold OFF.
— Press OFF on the unit until the display appears.
→ The monitor off function is activated (page 4).
— Touch anywhere on the display to turn the display back on.

The display does not respond to your touch correctly.
→ Touch one part of the display at a time. If two or more parts are touched simultaneously, the display will not operate correctly.
→ Calibrate the touch panel of the display (page 12).
→ Touch the pressure sensitive panel firmly.
→ The rear monitor cannot be operated. Icons displayed on the rear monitor are disabled.

Menu items cannot be selected.
→ Unavailable menu items are displayed in gray.

Radio reception

The stations cannot be received.
The sound is hampered by noises.
→ The connection is not correct.
— Connect the REM OUT lead (blue/white striped) or accessory power supply lead (red) to the power supply lead of a car's antenna (aerial) booster (only when your car has built-in radio antenna (aerial) in the rear/side glass).
— Check the connection of the car antenna (aerial).

— If the auto antenna (aerial) will not extend, check the connection of the power antenna (aerial) control lead.

Preset tuning is not possible.
→ The broadcast signal is too weak.

RDS

PTY displays [PTY not found.].
→ The current station is not an RDS station.
→ RDS data has not been received.
→ The station does not specify the program type.

Picture

There is no picture/picture noise occurs.
→ A connection has not been made correctly.
→ Check the connection between this unit and other equipment, and set the input selector of the equipment to the source corresponding to this unit.
→ The disc is defective or dirty.
→ Installation is not correct.
— Install the unit at an angle of less than 45° in a sturdy part of the car.
→ The parking cord (light green) is not connected to the parking brake switch cord, or the parking brake is not applied.

The picture does not fit in the screen.
→ The aspect ratio is fixed on the DVD.

There is no picture/picture noise occurs in the rear monitor.
→ A source/mode which is not connected is selected. If there is no input, no picture appears in the rear monitor.
→ The color system setting is incorrect.
— Set the color system to [PAL] or [NTSC] according to the connected monitor (page 12).
→ The picture of the rear view camera is displayed on this unit.
— No picture appears in the rear monitor if the picture of the rear view camera is displayed on this unit.

Sound

There is no sound/sound skips/sound cracks.
→ A connection has not been made correctly.
→ Check the connection between this unit and the connected equipment, and set the input selector of the equipment to the source corresponding to this unit.
→ The disc is defective or dirty.
→ Installation is not correct.
— Install the unit at an angle of less than 45° in a sturdy part of the car.
→ The MP3 file sampling rate is not 32, 44.1, or 48 kHz.
→ The WMA file sampling rate is not 44.1 kHz.
→ The MP3 file bit rate is not 48 to 192 kbps.
→ The WMA file bit rate is not 48 to 192 kbps.
→ The unit is in pause/reverse/fast-forward mode.
→ The settings for the outputs are not made correctly.
→ The DVD output level is too low (page 11).
→ The volume is too low.
→ The ATT function is activated.
→ The format is not supported (such as DTS).
— Check if the format is supported by this unit (page 16).

Sound is noisy.
→ Keep cords and cables away from each other.

Disc operation

The disc does not play.
→ The disc is defective or dirty.
→ The disc is not playable.
→ The DVD is not playable due to the region code.
→ The disc is not finalized (page 17).
→ The disc format and file version are incompatible with this unit (page 16, 17).
→ Press ⏏ to remove the disc.

MP3/WMA/Xvid files do not play.
→ Recording was not performed according to the ISO 9660 level 1 or level 2 format or the Joliet or Romeo expansion format (DATA CD), or the UDF Bridge format (DATA DVD) (page 17).
→ The file extension is incorrect (page 17).
→ Files are not stored in MP3/WMA/Xvid format.
→ If the disc contains multiple file types, only the selected file type (audio/video) can be played.
— Select the appropriate file type using the list (page 10).

MP3/WMA/Xvid files take longer to play than others.
→ The following discs take a longer time to start playback.
— a disc recorded with a complicated tree structure.
— a disc to which data can be added.

Certain functions cannot be performed.
→ Depending on the disc, you may not be able to perform operations such as stop, search, or repeat/shuffle play. For details, refer to the manual supplied with the disc.

The soundtrack/subtitle language or angle cannot be changed.
→ Use the DVD menu instead of the direct selection button on the remote commander (page 9).
→ Multilingual tracks, multilingual subtitles, or multi-angles are not recorded on the DVD.
→ The DVD prohibits changing.

The operation buttons do not function.
The disc will not eject.
→ Press the reset button (page 4).

USB playback

Items cannot be played via a USB hub.
→ Connect iPod/USB devices to this unit without USB hub.

Items cannot be played.
→ Reconnect the USB device.

The USB device takes longer to play.
→ The USB device contains large-sized files or files with a complicated tree structure.

The sound is intermittent.
→ The sound may be intermittent at a high bit rate of more than 320 kbps.

Error displays/messages

Disc Error
→ The unit cannot read the data due to some problem.
→ The data is damaged or corrupted.
→ The disc is corrupted.
→ The disc is incompatible with this unit.
→ The disc is not finalized.
→ The disc is dirty or inserted upside down.
— Clean or insert the disc correctly.
→ A blank disc has been inserted.
→ The disc cannot play due to a problem.
— Insert another disc.
→ The disc is not compatible with this unit.
— Insert a compatible disc.
→ Press ⏏ to remove the disc.

Hubs not supported.
→ USB hubs are not supported on this unit.

No Playable Data
→ The disc does not contain playable data.
→ The iPod has no playable data.
— Load music data/files into the iPod.

Overcurrent Caution on USB
→ The USB device is overloaded.
— Disconnect the USB device, then change the source by pressing the SOURCE button.
— Indicates that the USB device is out of order, or an unsupported device is connected.

Playback prohibited by region code.
→ The DVD's region code differs from the unit's region code.

The sound in DTS format is not audible.
→ Discs in DTS format are not supported. Sound is not output if the DTS format is selected.
— DTS formatted discs are not playable on this unit. Use a compatible disc format (page 16).

USB device not supported
→ For details on the compatibility of your USB device, visit the support site on the back cover.

_
→ The character cannot be displayed with the unit.

Language Code List

Language code list

The language spellings conform to the ISO 639: 1988 (E/F) standard.

Code	Language	Code	Language	Code	Language	Code	Language
1027	Afar	1183	Irish	1347	Maori	1507	Samoan
1028	Abkhazian	1186	Scots Gaelic	1349	Macedonian	1508	Shona
1032	Afrikaans	1194	Galician	1350	Malayalam	1509	Somali
1039	Amharic	1196	Guarani	1352	Mongolian	1511	Albanian
1044	Arabic	1203	Gujarati	1353	Moldavian	1512	Serbian
1045	Assamese	1209	Hausa	1356	Marathi	1513	Siswati
1051	Aymara	1217	Hindi	1357	Malay	1514	Sesotho
1052	Azerbaijani	1226	Croatian	1358	Maltese	1515	Sundanese
1053	Bashkir	1229	Hungarian	1363	Burmese	1516	Swedish
1057	Byelorussian	1233	Armenian	1365	Nauru	1517	Swahili
1059	Bulgarian	1235	Interlingua	1369	Nepali	1521	Tamil
1060	Bihari	1239	Interlingue	1376	Dutch	1525	Telugu
1061	Bislama	1245	Inupiak	1379	Norwegian	1527	Tajik
1066	Bengali;	1248	Indonesian	1393	Occitan	1528	Thai
	Bangla	1253	Icelandic	1403	(Afan)Oromo	1529	Tigrinya
1067	Tibetan	1254	Italian	1408	Oriya	1531	Turkmen
1070	Breton	1257	Hebrew	1417	Punjabi	1532	Tagalog
1079	Catalan	1261	Japanese	1428	Polish	1534	Setswana
1093	Corsican	1269	Yiddish	1435	Pashto;	1535	Tonga
1097	Czech	1283	Javanese		Pushto	1538	Turkish
1103	Welsh	1287	Georgian	1436	Portuguese	1539	Tsonga
1105	Danish	1297	Kazakh	1463	Quechua	1540	Tatar
1109	German	1298	Greenlandic	1481	Rhaeto-	1543	Twi
1130	Bhutani	1299	Cambodian		Romance	1557	Ukrainian
1142	Greek	1300	Kannada	1482	Kirundi	1564	Urdu
1144	English	1301	Korean	1483	Romanian	1572	Uzbek
1145	Esperanto	1305	Kashmiri	1489	Russian	1581	Vietnamese
1149	Spanish	1307	Kurdish	1491	Kinyarwanda	1587	Volapük
1150	Estonian	1311	Kirghiz	1495	Sanskrit	1613	Wolof
1151	Basque	1313	Latin	1498	Sindhi	1632	Xhosa
1157	Persian	1326	Lingala	1501	Sangho	1665	Yoruba
1165	Finnish	1327	Laothian	1502	Serbo-	1684	Chinese
1166	Fiji	1332	Lithuanian		Croatian	1697	Zulu
1171	Faroese	1334	Latvian;	1503	Singhalese		
1174	French		Lettish	1505	Slovak		
1181	Frisian	1345	Malagasy	1506	Slovenian	1703	Not specified

Support site

If you have any questions or for the latest support information on this product, please visit the web site below:

http://www.sony-asia.com/section/support
http://www.sony-asia.com/caraudio/

http://www.sony.net/

©2013 Sony Corporation Printed in China

* 4 4 8 4 8 3 4 3 3 * (1)